What's New in Fermenting:
A Brief Resource List

VEGETABLES

Collard Kraut:

Clemson Univ. Cooperative Ext. *Dill Pickles & Sauerkraut #HGIC 3380* (recipe)
http://www.clemson.edu/extension/hgic/food/food_safety/preservation/hgic3380.html

Kimchi:

Colorado State Univ. Extension *Understanding and Making Kimchi* (basic info and recipe)
http://farmtotable.colostate.edu/prepare-ferment/kimchi.php#.WPOflnLHeUk

FERMENTED BEVERAGES

Kombucha:

Colorado State Univ. Extension *Understanding and Making Kombucha* (basic info and recipe)
http://farmtotable.colostate.edu/prepare-ferment/kombucha.php#.WPOZV3LHeUn

Kefir:

NCHFP *Fermented Foods: Kefir* (basic info)
http://nchfp.uga.edu/publications/nchfp/factsheets/kefir.html
Dom's *How to Make Kefir* website (basic info, how-to's, etc. for both milk & water kefir)
http://users.chariot.net.au/~dna/Makekefir.html
UC ANR Food & Nutrition website *Is Kefir Yogurt Better Than Regular Yogurt?*
http://efnep.ucanr.edu/Nutrition_Questions/?uid=37&ds=775#

YOGURT & YOGURT CHEESE

NCHFP *Fermenting Yogurt at Home* (basic yogurt info, including a recipe for yogurt cheese)
http://nchfp.uga.edu/publications/nchfp/factsheets/yogurt.html
Univ. Alaska Fairbanks *Making Yogurt at Home* (basic info, recipes, and incubator ideas)
https://www.uaf.edu/files/ces/publications-db/catalog/hec/FNH-00062.pdf
New Mexico State Coop. Ext. *Homemade Yogurt* (info on how to freeze yogurt starter)
http://aces.nmsu.edu/county/bernalillo/foodhealth/documents/homemade-yogurt-faq.pdf
Univ. of Missouri Extension *Making Yogurt at Home* (more incubator ideas)
http://extension.missouri.edu/p/GH1183

FRESH CHEESE

Pacific Northwest Extension *Fresh Cheese Made Safely #PNW539* (queso fresco recipe)
https://pubs.wsu.edu/ItemDetail.aspx?ProductID=14946&SeriesCode=&CategoryID=236&Keyword=
New Mexico State Univ. Ext. *Making Homemade Cheese Guide E-216* (info and recipes)
http://aces.nmsu.edu/pubs/_e/E216/
Washington State Univ. The Abuela Project (community intervention project re queso fresco)
https://www.fsis.usda.gov/wps/wcm/connect/192b02db-e968-4852-8cf5-5c1133ddf37d/vhillers_77.pdf?MOD=AJPERES
Oregon State Univ. Extension *Home Pasteurization of Raw Milk SP 50-932* (how-to info)
http://extension.oregonstate.edu/lane/sites/default/files/documents/sp_50_932_homepasteurizationofrawmilk.pdf

SOURDOUGH (AND "NO-RISE" / "NO-KNEAD" BREAD WARNINGS)

Colorado State Univ. Extension *Sourdough Starter Best Practices* (basic info on starters)
http://farmtotable.colostate.edu/prepare-ferment/sourdough.php#.WPPv23LHeUn

North Carolina State Univ. Ext. *Enjoy Sourdough Breads – Safely!* (starter recipe)
https://cleveland.ces.ncsu.edu/2008/04/enjoy-sourdough-breads-safely/

Univ. Wisconsin Extension *Take Care when Sharing Friendship Bread* (info on no-knead bread)
http://fyi.uwex.edu/safepreserving/files/2014/06/Friendship_Bread.pdf

Serious Eats: *The Food Lab: The Science of No-Knead Bread* (how it works and how to make)
http://www.seriouseats.com/2011/06/the-food-lab-the-science-of-no-knead-dough.html

ONLINE RESOURCES FOR HOW-TO'S, STARTER CULTURES, ETC

Kombucha Kamp (SCOBYs and equipment plus videos, information and recipes)
https://www.kombuchakamp.com/

Cultures for Health (starter cultures plus recipes, videos, how to make yogurt in a crockpot, and how to make coconut and kefir yogurt) [also available at Amazon.com]
http://www.culturesforhealth.com/catalogsearch/result/index/?index=external_wordpress_post&q=yogurt

New England Cheesemaking Supply (starter cultures, supplies, and equipment)
www.cheesemaking.com

King Arthur Flour (lots of info on bread, including refrigerating and freezing dough)
http://search.kingarthurflour.com/search?p=Q&view=grid&deftab=blogs&w=no+knead+bread

ONLINE RESOURCES FOR PAIRING FLAVORS

Adventures in Spice *Flavor Map*
http://adventuresinspice.com/flavormap/flavormap.html

Bake It Right *Flavor Charts*
https://bakeitright.com/flavor-charts

Karen Page blog *Flavor Pairings & Affinities*
http://www.karenandandrew.com/food-drink/flavor-pairings-affinities/

BASIC REFERENCE BOOKS FOR YOUR PERSONAL LIBRARY

Fermented Vegetables by Kirsten K. Shockey & Christopher Shockey
Mastering Fermentation by Mary Karlin
The Art of Fermentation by Sandor Ellix Katz
The Big Book of Kombucha by Hannah Crum & Alex LaGory

WATER

for FERMENTING

clean and fresh with no chlorine, chloramines, or fluoride

soft water = low mineral content; hard water = heavy mineral content

pickles: blend of hard & soft water
kombucha: water lower in minerals is best

tap water usually contains chlorine or chloramines and may contain fluoride
well and spring water are typically higher in minerals
distilled water has been purified and contains no minerals or chemicals
bottled water may be spring/river/stream water or municipal tap – check label!

to remove chlorine, use a filter; boil for 20 minutes & allow to cool; or let sit for 24 hours
NOTE – once chlorine is removed, refrigerate water to limit bacterial regrowth

to soften hard water, boil for 15 minutes; let sit, covered, for 24 hours; skim off any scum
then pour carefully so as not to disturb sediment on bottom of container

boiling and charcoal-based filters will not remove fluoride (any probably not chloramines)
check filter manufacturer for specifications

SUGAR

for KOMBUCHA

Sugar – in the correct proportions – is required for successful fermentation of kombucha. It is the source of fuel and provides the nutrients necessary to maintain the health of the SCOBY. Reducing the amount of sugar or fermenting for too long a period could starve the cultures.

Sugar substitutes do not provide the necessary nutrients for kombucha and are not recommended. Sugars or syrups from plants other than sugar cane such as agave, maple, or coconut palm can produce inconsistent results and may be hard on the SCOBY. These are not recommended for kombucha. Less refined sugars have a higher mineral content and produce deeper flavors; these sugars may produce a more sour kombucha. Honey contains bacteria that can compete with kombucha SCOBYs; use pasteurized honey only when making kombucha.

White Cane (Table) Sugar (✓)

Refined sugar cane; free of minerals. Pure white in color.

Organic Cane Juice Crystals (✓✓)

Less refined than white sugar; low mineral content. Pale blond in color.

Turbinado or Raw Sugar (×)

Slightly less refined than cane juice crystals, most of molasses removed. Medium mineral content.
Produces a yeasty kombucha SCOBY; may shorten SCOBY life.

Rapadura/Sucanat (×)

Pressed and dried sugar cane juice; high mineral content. Medium brown color.
May increase carbonation.

Brown Sugar (×)

White sugar with molasses added back in; high mineral content.
Produces a yeasty kombucha SCOBY; may shorten SCOBY life.

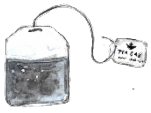
key: ✓ good ✓✓ very good × not recommended

TEA

for KOMBUCHA

True tea is made from *Camellia sinensis* leaves, with four main categories: White, Green, Oolong, and Black. These categories are determind primarily by how much the tea leaves are oxidized. A fifth type, called Pu'erh, is a fermented and aged tea which can also be used to make kombucha. Any tea type or combination of types can be used to make kombucha, although it is generally recommended that you start with 100% black tea for the first several batches. Avoid teas with oil (such as Earl Grey) or spices (such as masala chai), as the oils can interfere with fermentation and may lead to moldy SCOBYs. Once you have some experience – and several strong healthy SCOBYs – you can experiment with blending teas, including using herbal teas. Herbal teas should be combined with at least 25% true tea, but 50-75% true tea is best. Because some herbal teas contain essential oils that can impact the health of the culture, use a backup SCOBY and maintain it separately, at least until you know that it is healthy and shows positive growth.

White Tea



Unprocessed, minimally oxidized. Liquor is very pale green or yellow. Flavor is flowery and delicate. Makes a mild, flowery-tasting kombucha. When brewing kombucha, it is best blended with black, oolong, or green tea.

Green Tea

Delicately processed, minimally oxidized. Liquor is green or yellow. Flavor ranges from toasty, grassy, to fresh steam greens with mild astringency. Makes a lighter, softer kombucha. The younger the green tea, the lower the brewing temp should be to prevent bitterness.

Oolong Tea

Partially oxidized, described as halfway between green and black. Rich floral or fruity flavors and smooth, soft astringency. Makes a milder, somewhat fruity and grassy kombucha with an amber color. Oolong is a good base when flavoring for a 2nd fermentation.

Black Tea

Fully oxidized. Liquor ranges from dark brown to deep red. Strong flavor and astringency. Makes a bold, fruity-tasting and amber-colored kombucha. Steep at a relatively high temp and moderate length of time for maximum flavor without bitterness.

Sweet Tea

for your SCOBY Hotel

Start a SCOBY Hotel to house your extra SCOBYs. Add them to a clean, large glass jar with 2-4 cups of starter liquid, and cover with a tight-weave cloth secured with a rubber band. Reserve a cup or more of kombucha each time you brew to add to the jar along with the SCOBY.

Maintain your SCOBY Hotel periodically to keep your SCOBYs healthy. If the top SCOBY grows too thick (more than 1"), it can prohibit oxygen from reaching the liquid below it and stagnate or kill off the bacteria and yeast. Remove the SCOBY to a separate container, cover with a clean cloth, and let it drain for a bit for easier handling. Then pull it apart into layers or trim it with a serrated knife or sharp scissors. While the big thick SCOBY is draining, remove the other SCOBYs as necessary, one at a time, trimming off dark bits and gelatinous edges, and return them once they're cleaned to the Hotel.

Dark and cloudy liquid is a sign of excess yeast, which needs to be removed (generally every 2 to 6 months). To do so, move the SCOBYs to a container and cover with a cloth. Pour the liquid through a fine-mesh strainer or cheesecloth. Large strands of yeast will not pass through, but sufficient yeast will remain in the liquid. Do not rinse the SCOBYs, but if necessary pull off large clumps of yeast. Rinse the Hotel with hot water, scrubbing it if necessary, and return the SCOBYs. Pour the filtered liquid over the SCOBYs, add some sweet tea, then cover with a cloth.

Add sweet tea as needed to replace evaporated liquid and to keep the SCOBYs submerged. Sweet tea also provides food for the SCOBYs. Cover the Hotel with a cloth (as opposed to a lid) for at least a few weeks after adding sweet tea so that it can ferment properly.

To make sweet tea, steep tea in hot water, add sugar and stir to dissolve, then cool.

2 cups water
1 tea bag
2 tbsp sugar